Sensors provide 360° non-contact angular position sensing

Honeywell is rounding out its SMART position sensor portfolio with the new Rotary Configuration that provides 360° non-contact angular position sensing. With this product, Honeywell offers a SMART Position Sensor that encompasses the most basic geometric configurations: lines, angles, and circles. The new sensor is highly durable, accurate, and cost-effective, enabling design engineers to replace an optical encoder, or to utilize a sensor instead of a resolver which can be expensive and difficult to integrate into a system.

The SMART Position Sensor utilizes non-contact magnetoresistive (MR) technology to determine the object's position, which allows it to accurately sense position in dirty and harsh environments, replacing optical encoders, which utilize light to determine position, to obtain a highly accurate measurement. Resolvers are typically hand-wired devices with extremely high accuracy and durability for use in incredibly precise, non-serviceable aerospace applications.

"The new SMART Position Sensor provides customers with excellent and precise accuracy for those applications that require a high level of accuracy, as well as capable accuracy in applications where system tolerance may be of concern," said Chris Gottlieb, global product marketing manager for Honeywell Sensing and Control. "In addition, this device provides the same benefits that customers have come to expect with the SMART Position Sensor platform: lower total cost of ownership, high accuracy, and high durability."

Honeywell developed the new sensor to offer the high level of accuracy needed for the specific transportation and industrial applications in which it is designed to operate, measuring values down to 0.01º. Potential transportation applications include steering angle, articulation angle, and boom arm detection, while industrial customers could use it in solar panels or wind turbines.

Honeywell uses a patented combination of an ASIC and an array of MR sensors to accurately and reliably determine the position of a magnet collar attached to a rotating object to identify and control the object's position. This technology helps

OEMs reduce warranty costs because there are fewer parts to wear out or break down. This also helps end users reduce downtime due to fewer calibration requirements.

The SMART Position Sensor's automotive-grade potting makes it more resistant to vibration, shock, and extreme temperatures, improving reliability and allowing for use in a wide variety of tough applications. Repeatable output that occurs within a 3,0 mm ±2,0 mm [0.118 in ±0.079 in] air gap between the sensor and magnet collar expand application opportunities. The sensor also provides minimal signal error with up to 2,50 mm [0.10 in] of radial error, simplifying design-in.

Get more information on this product [1] – http://sensing.honeywell.com/smart%20position%20sensor,%20rotary%20configuration [2]

Learn more about Honeywell Sensing and Control [3] - http://sensing.honeywell.com/ [3]

Source URL (retrieved on *08/30/2014 - 12:31pm*):
http://www.ecnmag.com/products/2012/07/sensors-provide-360%C2%B0-non-contact-angular-position-sensing

Links:
[1] http://sensing.honeywell.com/index.php?ci_id=143923&la_id=1
[2] http://sensing.honeywell.com/smart%20position%20sensor,%20rotary%20configuration
[3] http://sensing.honeywell.com/